



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,750	10/29/2003	Yoshinori Endo	117633	5748
25944	7590	12/29/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			DO, AN H	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/694,750

Applicant(s)

ENDO, YOSHINORI

Examiner

An H. Do

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/26/05&amp;11/12/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species A in the reply filed on 12 October 2005 is acknowledged. The traversal is on the ground(s) that all claims 1-35 are generic claims of Species A and thus, the search and examination can be made without serious burden. This is found persuasive and hence, the Election/Restriction Requirement is hereby withdrawn.

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on 26 May 2005 and 12 November 2003 were filed and are being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6-8 and 11-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmitt et al (EP 0259144 A2).

Schmitt et al disclose in Figures 1-3 the following claimed limitations:

Regarding claims 1, 14 and 16, an image-forming device (reproduction machine 10) comprising: an image forming portion forming images (processing module 14) on an image recording medium; a signal-generating portion (I/O module 108) generating a status-indicating signal indicative of a status of the image forming portion; a storage

portion (memory 114) storing data of the status-indicating signal; and a storage control portion (microprocessor 110) storing, in the storage portion, data of the status-indicating signal in association with time series data indicative of a series of time.

Regarding claims 2, 15 and 17, wherein the storage control portion (110) stores, in the storage portion, data of the status-indicating signal when the status-indicating signal changes (Figure 3).

Regarding claim 3, wherein the time series data indicates time intervals between successive timings when the status indicating signal changes in succession (column 5, lines 54-57).

Regarding claim 4, wherein when the status-indicating signal changes, the storage control portion stores the status-indicating signal data and timing data as the time series data, the timing data indicating a length of time that has been elapsed from when the status-indicating signal has changed latest until the time when the status-indicating signal presently changes (column 5, lines 57-64).

Regarding claim 6, wherein the image forming portion includes at least one operating member that operates to form images on the image recording medium, wherein the signal-generating portion includes: an operation signal supplying portion supplying at least one electric operation signal to the at least one operating member, each operating member operating in accordance with the received operation signal, at least one sensor (S1-S5) detecting at least one portion in the image forming portion and generating at least one detection signal; an error detection portion (jam detection 116) determining that an error has occurred and cleared based on the at least one

detection signal generated from the at least one sensor and generating an error signal indicative of an error, and wherein the status-indicating signal includes at least one of the at least one electric operation signals the at least one detection signal, and the error signal (Figure 3).

Regarding claim 7, further comprising an output portion outputting the status-indicating signal data, which is stored in association with the time series data in the storage portion.

Regarding claim 8, further comprising: a connection portion connected to an external device; a power source and a nonvolatile memory (column 6, lines 17-22), wherein the output portion outputs the data of the status-indicating signal to either one of the external device, the nonvolatile memory, and the image forming portion, the nonvolatile memory maintaining the data of the status-indicating signal after the power source is turned off when the nonvolatile memory receives the data of the status-indicating signal, the image forming portion forming an image of the data of the status-indicating signal onto the image recording medium when the image forming portion receives the data of the status-indicating signal.

Regarding claim 11, wherein the output portion automatically outputs the data of the status-indicating signal when the status-indicating signal indicates occurrence of error (column 6, lines 34-37).

Regarding claim 12, wherein the output portion outputs the data of the status-indicating signal that has changed within a predetermined period of time before the occurrence of error (column 6, lines 37-40).

Regarding claim 13, wherein the output portion automatically outputs the data of the status-indicating signal when the status-indicating signal indicates clearance of error (column 6, lines 48-51).

Regarding claim 18, wherein the image forming portion includes a conveying portion (belt 30) conveying the image recording medium, and wherein the sensor (S1-S5) include a recording medium conveying state detection sensor detecting a conveying state of the image recording medium (Figure 3).

Regarding claim 19, wherein the sensor includes a plurality of sensors (S1-S5), each detecting a corresponding status of the image forming portion and generating a detection signal, and wherein the storage control portion stores, in the storage portion, data of the detection signal generated from each sensor in association with the time data (Figure 3).

Regarding claim 20, further comprising an error detection portion (jam detection 116) determining that an error has occurred based on the detection signal generated from the sensor; wherein the storage control portion further stores, in the storage portion, data indicative of the occurrence of error determined by the error detection portion in association with time data indicative of when the error has occurred.

Regarding claim 21, wherein when the error detection portion (116) determines that an error has occurred, the storage control portion stores the error data and time data indicative of when the error has occurred (Figure 3).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al (EP 0259144 A2) in view of Masakiyo (JP 57139765A).

Schmitt et al disclose the claimed invention except for the limitation of wherein the storage control portion includes a timing portion that measures time which has been elapsed from when the status-indicating signal has changed latest until when the status-indicating signal presently changes, the timing portion stopping measuring the elapsed time when a length of the elapsed time reaches a predetermined time, thereby allowing the time series data to have either one of a value smaller than or equal to the predetermined time and an overflow value indicative of a value greater than the predetermined time.

Masakiyo teaches the storage control portion includes a timing portion that measures time which has been elapsed from when the status-indicating signal has changed latest until when the status-indicating signal presently changes, the timing portion stopping measuring the elapsed time when a length of the elapsed time reaches a predetermined time, thereby allowing the time series data to have either one of a value smaller than or equal to the predetermined time and an overflow value indicative of a value greater than the predetermined time (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a timing portion that measures time which has been elapsed from when the status-indicating signal has changed latest until when the status-indicating signal presently changes, the timing portion stopping measuring the elapsed time when a length of the elapsed time reaches a predetermined time, thereby allowing the time series data to have either one of a value smaller than or equal to the predetermined time and an overflow value indicative of a value greater than the predetermined time, as taught by Masakiyo into Schmitt et al, for the purpose of detecting the jam at certain sensing location (Abstract).

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al (EP 0259144 A2) in view of Kagita (EP 0685818A2).

Schmitt et al disclose the claimed invention except for the limitation of an output selection portion enabling an operator to select one of the external device, the nonvolatile memory, and the image forming portion, to which the operator desires to output the data of the status-indicating signal.

Kagita teaches an output selection portion enabling an operator to select one of the external device, the nonvolatile memory, and the image forming portion, to which the operator desires to output the data of the status-indicating signal (column 5, lines 44-58)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an output selection portion enabling an operator to select one of the external device, the nonvolatile memory, and the image forming portion, to



which the operator desires to output the data of the status-indicating signal, as taught by Kagita into Schmitt et al, for the purpose of checking the content of an error after the error has occurred (Abstract).

8. Claims 22-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al (EP 0259144 A2) in view of Ben-Natan et al (US 5,790,779).

Schmitt et al further disclose the following claimed limitations:

Regarding claim 23, wherein when the error detection portion (116) determines that an error has been cleared, the storage control portion stores the error data and time data indicative of when the error has been cleared (column 6, lines 44-51).

Regarding claim 24, wherein the image forming portion (processing module 14) includes an operating member that operates to form images on the image recording medium, further comprising: an operation signal (S1-S5) supplying portion supplying an operation signal to the operating member, the operating member operating in accordance with the operation signal, wherein the storage control portion (microprocessor 110) stores, in the storage portion, data of the operation signal that the operation signal supplying portion has supplied to the operating member in association with the time data.

Regarding claim 25, wherein when the operation signal changes, the storage control portion stores the operation signal data and time data indicative of when the operation signal changes (Figure 3).

Regarding claim 26, further comprising an output portion (I/O module 108) outputting the detection signal data and its associated time data, the error occurrence

data and its associated time data, the error clearance data and its associated time data, and the operation signal data and its associated time data (Figure 3)

Regarding claim 27, wherein the output portion outputs the data of the error occurrence, the data of the error clearance, and the data of the detection signal and the operation signal that have changed during a prescribed time period up until the error has occurred (Figure 3).

Regarding claim 28, further comprising a connection portion connected to an external device (120), and wherein the output portion includes an external device output portion outputting the detection signal data and its associated time data, the error occurrence data and its associated time data, the error clearance data and its associated time data, and the operation signal data and its associated time data to the external device.

Regarding claim 29, further comprising a nonvolatile memory (column 6, lines 17-22), and wherein the output portion includes a memory output portion outputting the detection signal data and its associated time data, the error occurrence data and its associated time data, the error clearance data and its associated time data, and the operation signal data and its associated time data to the nonvolatile memory (Figure 3).

Regarding claim 30, wherein the output portion includes a print output portion controlling the image forming portion to print the detection signal data and its associated time data, the error occurrence data and its associated time data, the error clearance data and its associated time data, and the operation signal data and its associated time data on the image recording medium (Figure 3, column 5, lines 35-64).

Regarding claim 31, further comprising: a mode selection portion enabling an operator to select one of an output enable mode and an output disable mode; and a mode setting portion setting the output portion into the operator's selected mode, the output portion in the output enable mode executing its output operation, the output portion in the output disable mode failing to execute its output operation (Figure 3, column 5, lines 42-44).

Regarding claim 32, wherein the output portion executes its output operation when the error detection portion determines that an error has occurred (column 6, lines 37-40).

Regarding claim 33, wherein the output portion executes its output operation when the error has been cleared (column 6, lines 48-51).

Regarding claim 34, wherein the storage control portion includes a timing portion measuring time which has been elapsed from a first time when the storage control portion has written data of either one of the detection signal data, the operation signal data, the error occurrence data, and the error clearance data latest until when the storage control portion presently writes data of either one of the detection signal data, the operation signal data, the error occurrence data, and the error clearance data, the storage control portion presently storing the time data that is indicative of a length of the measured time (column 5, lines 47-64).

Regarding claim 35, wherein the timing portion stops measuring the elapsed time when the length of the elapsed time reaches a predetermined value (column 6, lines 6-8).

Schmitt et al disclose the claimed invention except for reciting the following claimed feature:

Regarding claim 22, wherein the error detection portion determines that the error has been cleared based on the detection signal generated from the sensor; wherein the storage control portion further stores, in the storage portion, data indicative of the clearance of error determined by the error detection portion in association with time data indicative of when the error has been cleared.

Ben-Natan et al teach wherein the error detection portion determines that the error has been cleared based on the detection signal generated from the sensor; wherein the storage control portion further stores, in the storage portion, data indicative of the clearance of error determined by the error detection portion in association with time data indicative of when the error has been cleared (column 6, line 45 to column 7, line 17).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the error detection portion determines that the error has been cleared based on the detection signal generated from the sensor; wherein the storage control portion further stores, in the storage portion, data indicative of the clearance of error determined by the error detection portion in association with time data indicative of when the error has been cleared, as taught by Ben-Natan et al into Schmitt et al, for the purpose of reporting the success of a previously failed operation (column 1, line 67 to column 2, line 3).

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD  
December 27, 2005



An H. Do  
Examiner  
Art Unit 2853